

Claims

1. Process for the production of hydrocarbon from a fermentation liquid comprising:
 - forming said hydrocarbon from said fermentation liquid using a biocatalyst;
 - contacting said fermentation liquid with a solvent impregnated porous
 - 5 carrier, which solvent impregnated porous carrier has a density that is different from said fermentation liquid, whereby said formed hydrocarbon is sorbed by said solvent impregnated carrier;
 - regenerating said solvent impregnated carrier, whereby a stream of said hydrocarbon is obtained; and
 - 10 - optionally, recycling said regenerated solvent impregnated carrier.
2. Process according to claim 1, wherein said solvent impregnated carrier comprises a polymeric carrier.
3. Process according to claim 2, wherein said polymeric carrier comprises one or more components selected from polystyrene, polypropylene,
- 15 polytetrafluoroethylene, silicone, polyethylene, and (regenerated) cellulose, which are optionally crosslinked.
4. Process according to claim 1, wherein said solvent impregnated carrier comprises an inorganic carrier, preferably selected from silica, alumina, aluminosilicates and combinations thereof.
- 20 5. Process according to any of the previous claims, wherein said regeneration is carried out by using steam, by back-extraction, by heating, or by combinations thereof.
6. Process according to any of the previous claims, wherein said product hydrocarbon is 4-hydroxybenzoic acid, benzaldehyde, or a mixture
- 25 thereof.

7. Process according to any of the previous claims, wherein said biocatalyst is selected from *Pseudomonas putida*, *Escherichia coli*, *Sacharomyces cerevisiae*, *Lactobacillus* species, *Aspergillus niger*.
8. Process according to any of the previous claims, wherein
- 5 - said solvent impregnated carriers are inserted essentially at or near the bottom of a fermentor containing said fermentation liquid and are collected essentially at or near the top of said fermentor, wherein said solvent impregnated carriers have a density that is lower than that of said fermentation liquid; or
- 10 - said solvent impregnated carriers are inserted essentially at or near the top of a fermentor containing said fermentation liquid and are collected essentially at or near the bottom of said fermentor, wherein said solvent impregnated carriers have a density that is higher than that of said fermentation liquid.
9. Process according to any of the previous claims, which is carried out
- 15 continuously.
10. Process according to any of the previous claims, wherein said porous solvent impregnated carrier has an average pore diameter of from 2.5 μm to 50 μm .
11. Process according to any of the previous claims, wherein the porosity
- 20 is from 80 to 80 %.